



TECHNICAL LEAFLET

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PREPARING A CONTRACT FOR ARCHIVAL-QUALITY MICROFILMING SERVICES

Introduction

According to Ala. Code 41-13-40, microfilm of public records, “when duly authenticated by the custodian thereof, shall have the same force and effect at law as the original record. . . .” However, in order to provide an acceptable substitute for the original, microfilm of an *archival* record must also meet the technical quality standards set forth below. The Alabama Department of Archives and History (ADAH) offers direct assistance to public agencies with various aspects of micrographics, such as reviewing contracts for microfilming services.

The following sample contract is a guide for state and local agencies in preparing service contracts with micrographic laboratories. It identifies the contract issues and technical standards that apply to microfilming work. **Agencies should not adopt this sample contract in verbatim form.** Rather, they should adapt it to their own microfilming needs, based on the legal and operational requirements governing their records. This contract does not address computer output microfilm (COM); nor does it address the microfilming of engineering drawings. Staff of the ADAH Government Records Division can offer advice on micrographic and reformatting issues, cite appropriate standards for alternate types of film or filming procedures, and review draft microfilming contracts. An agency’s legal counsel and purchasing officer should also review any microfilming contract prior to signature.

Standards and procedures outlined here apply to microfilming records that are defined as “permanent” in an agency’s records disposition authority (RDA). Such records provide the adequate documentation required by state law to describe an agency’s functions fully over time. Some may warrant transfer to an archives for preservation and access by citizens of the state. **Agencies are responsible for assuring that microfilm of archival records meets technical and other standards approved by the American National Standards Institute (ANSI) and the Association for Image and Information Management (AIIM).** An agency’s film must meet these standards and be stored in an approved storage facility before the destruction of original paper records will be permitted. Agencies are responsible for verifying that the microfilm replacement is a true and accurate copy of the original record prior to its destruction. Destruction of original records will not be authorized unless the state or local agency is in compliance with a records disposition authority (RDA) approved by the State or Local Government Records Commission.

Titles of relevant ANSI/AIIM micrographic standards are cited in the appended bibliography. Agencies and vendors may wish to consult the standards during contract preparation and incorporate their language in the contract. Although ADAH no longer certifies individual microfilming vendors, the Government Records

Division can provide a sample list of vendors. Also available is the procedural leaflet "Getting Started with Microfilm" for agencies that desire an overview of microfilming issues. For general records management advice and information, contact the **Government Records Division, Alabama Department of Archives and History, P.O. Box 300100, Montgomery, AL 36130-0100; Telephone: (334)242-4452; FAX: (334)240-3433; e-mail: records@archives.state.al.us; ADAH web site: www.archives.state.al.us.**

SAMPLE MICROFILMING CONTRACT

- I. **Parties.** This contract is made this day the *(number of day)* of *(month)*, *(year)*, by and between *(name of filming agent, hereafter "filming agent")*, represented by *(name of representative)*, and *(name of government agency, hereafter "the agency")*.
- II. **Consideration.** For and in consideration of the mutual covenants and terms hereinafter set forth and the sum of one dollar (\$1.00) each in hand to the other paid, receipt whereof is hereby acknowledged, and such other consideration as may be set forth below, the parties hereto do contract and agree as set forth hereinafter. **(Note: Specific consideration, dollar amounts, payment terms, etc., should be set forth at the end of the consideration clause. They are referred to in item D below.)**
- III. **Terms.**
- A. This contract comprises this page and *(number of pages)* following pages.
- B. This contract embodies the entire agreement between the parties. Any changes or modifications must be made in writing and executed in the same manner as this contract.
- C. This contract shall begin on the *(number of day)* day of *(month)*, *(year)*, and extend over a period of *(period of contract duration or starting date - ending date)*
- D. *[contracts of one year or less]* Prices will be as quoted in the bid prepared by the filming agent dated *(date)*, attached as Appendix A. Prices quoted will be net and will remain firm for the duration of the project from *(date)* to *(date)*, or until filming is completed. Charges are calculated at *(number of cents)* per frame and include the following services:
1. Preparation of original documents for filming, as specified below. *[This clause may be modified to stipulate that the agency shall perform document preparation work.]*
 2. Production of a first-generation camera original on silver gelatin film with a life expectancy (LE) rating of 500 years.
 3. Duplication of a second-generation silver copy master and third-generation use copies, as specified below.
 4. Processing and quality-control inspection of microfilm, as specified below.
 5. Provision of packing and storage materials for film, as specified below.
 6. Pick-up and transport of documents for microfilming and delivery of completed film. These charges will be itemized separately, unless otherwise agreed.

OR

- D. *[multi-year contracts]* Prices will be quoted in the bid prepared by the filming agent dated *(date)*, attached as Appendix A. For contracts lasting two years or longer, prices are subject to renegotiation on an annual basis during the period of the contract. Proof of any increase in costs

must be submitted in writing by the filming agent to the agency sixty (60) days before the end of a twelve (12)-month period, and must be based on a general price increase within the industry. No more than one price increase will be permitted during each renewal year of the contract. Any increase in price must be approved in writing by the agency's administrative officer. In the event that a price increase cannot be mutually agreed upon, the contract is subject to cancellation by either party. During the period of the contract, the agency is to benefit from any decrease in the filming agent's costs. Charges are calculated at (*number of cents*) per frame, and include the following services [*items 1-6 above*]:

- E. Materials and services furnished by the filming agent to the agency are not subject to federal excise tax, federal transportation tax, or state sales or use tax; and such taxes will not be included in price quotations. The agency's Federal Tax Identification Number is (*number*).
- F. The agency will be the sole owner of all microfilm, including copies, produced by the filming agent from the agency's documents or records. No part of the microfilm produced under this contract may be sold, given away, used for advertisement, or otherwise disposed of by the filming agent without prior written permission from the agency.

IV. Records. *[All records, or other materials to be microfilmed, should be specified in this portion of the contract. Include a description of the records by size, paper color, ink color, volume, inclusive dates, arrangement, and physical condition. If the records contain confidential information, any restrictions on access to them during storage, filming, or transfer by the filming agent should be clearly stated.]*

V. Conditions

- A. This agreement applies to microfilming services to be provided by the filming agent to the agency. The filming agent's microfilm production, duplication, processing, and inspection procedures shall comply with standards established by the **American National Standards Institute (ANSI)** and the **Association for Information and Image Management (AIIM)**, as endorsed by the State and Local Government Records Commissions of the State of Alabama and as specified in section V of this contract. The filming agent must adhere to these directives unless written instructions from the agency or its authorized representative allow otherwise.
- B. The filming procedures and instructions specified by the agency shall not be changed by the filming agent without prior written consent by the agency or its authorized representative. If any item cannot be filmed in the manner specified after consultation with the agency, it shall be returned by the filming agent with justification for its rejection.
- C. Unless otherwise specified, all services shall be performed in a timely and satisfactory manner by the filming agent. No subcontracting shall be permitted without the written approval of the agency.
- D. Any errors made by the agency that are identified in the filming process shall be returned for correction at the agency's expense.
- E. Any errors made by the filming agent that are identified in the agency's inspection process shall be corrected, or the item refilmed, without additional charge to the agency. The agency's inspection shall occur within thirty (30) days of its receipt of film. Corrected film shall be returned within thirty (30) days of the filming agent's receipt of items for correction. Any extra transportation or mailing costs resulting from such errors shall be paid for by the filming agent.
- F. The filming agent shall exercise due care in handling all records or other materials filmed on-site at the agency. The agency shall provide security and care of the filming agent's equipment during on-site filming, and shall be responsible for any theft or damage. The filming agent shall

ensure the safety of all records or other materials released into its custody for filming, from the time they leave the agency until they are returned. In the event that any items are lost or damaged during pick-up, filming, or delivery, the filming agent shall pay the cost of repairing those that can be repaired or, if it is possible to do so, providing replacement microfilm at its expense.

- G. The filming agent shall permit representatives from the agency to inspect the filming facility during its normal working hours at any time during the contract period.
- H. Failure of the filming agent to meet the requirements and performance standards of this contract shall constitute default. The agency shall notify the filming agent in writing of unsatisfactory service, poor workmanship, or poor delivery. Failure of the filming agent to correct the conditions of default at its own expense, or to come to an amicable solution with the agency, within thirty (30) days shall constitute default. Recurrences of unsatisfactory work shall constitute default.
- I. Either the agency or the filming agent shall have the option to cancel the contract upon thirty (30) days' written notice to the other party for performance not in compliance with all instructions and specifications stated herein.

VI. Specifications for Filming and Quality Control. All filming and quality control processes and practices shall be in accordance with the guidelines set forth as follows:

- A. **Work Areas:** The filming work and storage areas shall be free of contaminants that might threaten, damage, or adversely affect either original materials or microfilm. Smoking, eating, and drinking, in particular, shall not be allowed within work areas.

- B. **Pre-filming Preparation of Records:**

Pre-filming preparation of records shall be carried out as follows:

- 1. Prior to filming, each item shall be examined by the agency to ensure the accuracy of its bibliographic information.
- 2. All printed information present, including that contained on wrappers, title pages, etc., shall be included for filming. Covers and decorated end pages shall also be filmed.
- 3. Volumes may be disbound only by permission of the agency.
- 4. The text shall be maintained in correct order and checked for legibility.
- 5. If a record series does not fit on one reel of film, it shall be divided at a logical breaking point, as determined by the agency.
- 6. All clips, staples, and fasteners shall be removed
 - ☐ by the agency
 - ☐ by the filming agent
- 7. Targets shall be prepared
 - ☐ by the agency
 - ☐ by the filming agent
- 8. Targets shall be inserted
 - ☐ by the agency
 - ☐ by the filming agent

Targets shall be removed
 - ☐ by the agency
 - ☐ by the filming agent

9. The agency should specify whether filming shall be in "comic mode" or "cine mode," and whether one or two images shall appear in each frame.
10. Uniform targets are sheets of clean, uncreased white bond paper or card stock, cut to fill the frame. All targets used on a given reel shall be of the same reflectance. Targets shall be eye-legible and face in the proper direction. They shall adhere to the requirements of **ANSI/AIIM MS-23-1998** and **ANSI/NISO Z39.62-2000**. The required target sequence is as follows: START, REEL #, TECHNICAL TARGETS (resolution chart and uniform density), SPECIAL (access restrictions etc.), DECLARATION OF CAMERA OPERATOR (include reduction ratio), BIBLIOGRAPHIC INFORMATION (provided by agency), TITLE, TEXT, END OF TITLE (if necessary), CONTINUATION (if necessary), UNIFORM DENSITY, END OF REEL. Targets shall agree with what is filmed
11. Missing page targets shall be inserted in place of missing pages
 - ☐ by the agency
 - ☐ by the filming agent
12. Blank pages shall not be filmed. (A special target shall be included at the proper place at the front of the reel to explain that some pages were not filmed because they were blank. This target shall include the page numbers that were not filmed.)

C. *Film, Reel, Fastener, and Container Requirements*

1. All first-generation film shall be the correct camera speed, panchromatic, extremely fine grain, silver-gelatin type document recording film coated on nonperforated polyester base (4 mil or thicker) with anti-halation dye system. It shall have a life-expectancy rating of LE-500, as described by **ANSI/NAPM IT9.1-1996**.
2. All second-generation film shall be silver-gelatin nonperforated polyester-based duplicating film.
3. Third-generation film shall be medium contrast diazo film, coated on polyester base, have good fade resistance, be formulated to meet the requirements for an extended-term storage film (LE-100), and be manufactured and processed as described in **ANSI IT9.5-1992**. If the legibility of low-contrast (e.g., handwritten) documents is a concern, the agency may specify silver third-generation microfilm.
4. All raw film shall be undamaged and known to be fully effective, based on the manufacturer's expiration date.
5. Processed film shall be delivered wound with the START target at the outer end, in accordance with **ANSI/AIIM MS23-1998**, on storage reels that are chemically inert, as specified in **PIMA (paper) IT9.2-1998**
6. Storage reels shall be sturdy, with dimensions conforming to **ANSI/AIIM MS34-1990** and **ANSI/AIIM MS29-1992**, and shall be free of mold-release agents. No film shall extend closer than 6mm from the outer edge of the reel.
7. All processed film shall be confined on reels; all components of fasteners must conform to **ANSI IT9.1-1992**. First-generation film shall be stored on reels in containers made of acid- and lignin-free buffered paper or board, in accordance with **ANSI/AIIM MS34-1990** and **PIMA (paper) IT9.2-1998**, or in airtight, inert plastic containers if air pollution is a problem.

D. Camera Requirements

1. Only planetary cameras shall be used to film original documents having archival value that are to be retained or original documents that are in poor condition, as determined by the agency. Rotary cameras may be used for certain documents that are in good condition, are not going to be retained by the agency, and meet the manufacturer's requirements.
2. A planetary camera shall rest on a level surface, free of vibrations and away from other cameras and reflective lights. Both planetary and rotary cameras shall have constant voltage and shall be checked weekly and shall be checked and maintained according to the manufacturer's instructions.
3. Film size and camera reduction ratios shall be determined by the parties involved, but shall be suitable for the size and condition of the documents to be filmed. The resolution of the film must be 120 line pairs per millimeter or higher. The resolution must be based upon a reading of 5 lines both vertically and horizontally, as directed in **ANSI/AIIM MS51-1991**.

E. Processing Requirements

1. As set forth in **ANSI/AIIM MS48-1990**, silver gelatin film used to make first-generation copies of documents having archival value shall be processed so that the residual thiosulfate ion concentration is greater than zero, but does not exceed .014 grams per square meter in a clear area.
2. A methylene blue test for residual thiosulfates shall be performed within two weeks of processing, as specified in **ANSI/NAPM IT9.17-1993** and **ANSI/NAPM IT9.1-1996**.
3. The filming agent's procedures for processing first-generation silver gelatin film shall otherwise meet the standards established in **ANSI/AIIM MS23-1998**.

F. Filming Agent Quality Control Requirements

1. Inspection and quality control data shall always be recorded on a Quality Control Report form, and the original report form shall be delivered to the agency for each reel.
2. Clean, white, lint-free cotton (as specified in **AIIM TR13-1988**) or nylon gloves shall be worn at all times by those handling processed microfilm.
3. A sample film shall be tested for residual thiosulfate and other chemicals, in accordance with **ANSI/NAPM IT9.1-1996**. The frequency of testing shall be determined by the volume of film processed, but testing shall be performed at least once every day that a first-generation film is processed. If the test is conducted in-house, third-party verification by an independent testing laboratory must be carried out monthly.
4. Density readings shall be taken for every reel of film, and as necessary to ensure the legibility of documents.
5. *Evaluating film density*
 - a. The densitometer used shall be a transmission densitometer with a reading aperture of 1mm. It should be calibrated each time it is turned on. The calibration patch should be routinely compared with a calibrated step strip from the National Institute for Standards and Technology (NIST).

- b. The recommended background densities for images are between 0.80 and 1.30 in negative-appearing silver-gelatin microfilms which have a base-plus-fog density equal to or less than 0.10. At least one density reading per reel shall be taken on the minimum density. Maximum density reading shall be taken on background areas of the image that are representative of the background on which the text appears. When microfilming documents of mixed qualities, image background densities between 0.90 and 1.10 should be used as a starting point for the density values. The optimum density value for micro-filmed images is that which makes them legible for their intended use. (See **ANSI/AIIM MS23-1998**.)
 - c. Density readings shall not vary by more than 0.20 within a title; nor may the average densities of titles on the same reel vary by more than 0.20.
 - d. Care should be taken that no text or clear part of the film is included in the area being read. Density readings should not be taken on darkened or browned margins if the margins are darker than the rest of the page.
 - e. *Duplicate Negatives.* The minimum density of duplicate negative films shall meet the film manufacturer's recommendation, as verified on the appropriate specification sheet, or shall meet the guidelines of **ANSI/AIIM MS43-1988**. At least one density reading per reel shall be taken of the minimum density and recorded on the Quality Control Report form.
 - f. *Duplicate Positives.* The maximum of the minimum density (D_{min}) shall be as required by **ANSI/AIIM MS43-1988**. At least one density reading per reel shall be taken.
 - g. *Service Copies.* The minimum density of service copies shall meet the requirements of **ANSI/AIIM MS43-1988**. At least one density reading per reel shall be taken of the minimum density and recorded on the Quality Control Report. The film should be legible with sufficient contrast for use.
- 6. *Evaluating film resolution.* Every reel of first-generation film must be able to be resolved at 120 line pairs per mm or higher.
 - 7. *Inspection.* Every reel of first-generation film shall be inspected frame-by-frame for visible defects and missing pages over a light inspection box or reader that allows manual advance/rewind of film, with glass platens in the open position so that only film rollers come into contact with film. Equipment used for inspection shall not scratch or otherwise damage the film. Every reel of second- and third-generation film must be inspected in the same manner to ensure legibility and freedom from defects.
 - 8. *Retakes.* When retakes are required, incorrect or defective frames/images shall be removed from the first-generation camera negative. Refilming shall include at least two full frames preceding and succeeding the frames/images being reshot. Retakes shall always be spliced into the reel at the location where those pages should have appeared.
 - 9. *Splices.* There shall be no more than three (3) splices or six (6) cuts per reel of first-generation film. All splices shall be made in accordance with **ANSI/AIIM MS18-1998**. Ultrasonic welder/splicers must be used. There shall be no splices in the second- or third-generation film; nor shall a splice be made between the technical target and the first ten frames of text. There shall be not less than six (6) inches between splices.

10. *Leaders/Trailers.* Leaders and trailers on microfilm reels shall be not less than twenty (20) inches long and always of the same base material as the film. Follow the standards established in **ANSI/AIIM MS23-1998**.

G. ***Microfilm Storage Requirements***

1. First-generation film shall be stored in closed containers of inert material (sealed if conditions require) complying with **ANSI IT9.11-1993**.
2. First-generation film shall be stored in a fire-resistant vault meeting the standards set forth in **ANSI IT9.11-1993** and **NFPA 232-2000**. The vault shall not be used as work area and shall contain no flammable materials. No microfilm shall be stored in the vault for at least four weeks after painting.
3. Any vault in which first-generation film is stored shall have controlled humidity and temperature. Relative humidity must remain under 40% and temperature under 70 degrees Fahrenheit, with a maximum variation of no more than 5% or 5 degrees within a 24-hour period. If first-generation microfilm is stored under 30% relative humidity and/or under 60 degrees Fahrenheit, the film must be warmed and conditioned prior to use by allowing the film to return to room temperature.
4. First-generation film shall be stored under .05 inches of pressure above atmospheric pressure, if possible.
5. Unless their filters are capable of removing particles of 0.3 micrometers in size, dehumidifiers in rooms where first-generation microforms are stored shall not use desiccants. Air filters in such rooms shall have cleaning efficiency of at least 80% when tested with atmospheric air, in accordance with **ANSI IT9.11-1993**.
6. Silver film shall not be stored in the same room with other types of film or in any room connected by air ducts to a room containing other types of film.
7. Inspection/replacement requirements for stored microfilm:

Requirements for inspection by filming agent of film stored on its premises:

- a. A 1% random sample shall be taken every two years. A new lot will be sampled with each test, with some overlap to the previous lot permitted.
- b. The filming agent shall reread resolution and density for all reels sampled. If deterioration of the sampled reels is found, the filming agent shall conduct an extensive inspection to find all deteriorated reels stored in its vault. If the filming agent storing the film was also responsible for processing the film, it shall replace at its expense all deteriorated film belonging to the agency.
- c. Any replacement microfilm produced due to the deterioration of originals stored by the filming agent shall comply with the foregoing requirements for original microfilm production, and shall be supplied to the agency at the filming agent's expense.

Right of inspection by the agency

- a. The filming agent's microfilm storage facility shall be open to inspection by the agency or its representative during normal working hours.

- b. All areas where the agency's film is stored, all areas connected to the film storage area by air ducts, and all areas outside doors leading to the storage area, shall be open to inspection by the agency.
- c. The filming agent's storage facility personnel shall be available to answer questions concerning the storage of the agency's film. The agency or its representative shall have the right to inspect any reels of film of its choosing to ensure compliance with the requirements of this contract.

VII. Termination. *[Specify notice of termination requirements, to whom such notice will be made, at what address, the time interval between notice and termination, and specification of liquidated damages for termination. See, for example, items H and I of section V above. The agency's legal counsel should draft this and the following portions of the contract.]*

VIII. Execution. *[Specify date of execution; provide signature lines for parties or their agents and for acknowledging signatures (such as notaries, attesting officers, etc.).]*

FILMING AGENT QUALITY CONTROL REPORT [sample]

Name of Agency _____ Department _____

Name of Filming Agent _____ Contact Person _____

Project Name/Contract Number _____

Master Negative Storage Number _____ Reel No. _____ Of _____

RecordsDisposition Authority Functional Area or Records Schedule Number _____

Records Series Title _____ Years Filmed _____

1. FILMING
Operator (initials) _____ Camera: _____ Filming date (yr/mo/day) _____
Reduction ratio _____
Image Orientation _____ Required changes in orientation or reduction? _____
 2. INITIAL QUALITY CONTROL
Processor (init) _____ Inspector (init) _____ Processing date _____
Density readings 1. ____ 2. ____ 3. ____ 4. ____ 5. ____ 6. ____ 7. ____ 8. ____ Average _____
Resolution _____ Poorest pattern read (target 1) _____
Poorest pattern read (target 2) _____
 3. FILMING ERRORS (give frame numbers or location)
Overexposed images _____ Density _____
Underexposed images _____ Density _____
Focus defects _____ Poor contrast _____
Obstructions in frame _____ Cause _____
Streaks _____ Fogging _____
Other _____
 4. PHYSICAL DEFECTS (give frame numbers or location information)
Fingerprints _____
Scratches _____
Water spots _____
Dust/dirt/etc. _____
Other/Comments _____
 5. ACTIONS TO CORRECT DEFECTS
Refilm entire reel? _____ Refilm items (list) _____
Splices needed? (number) _____ Number of exposures refilmed _____
Other action/comments _____
 6. APPROVAL FOR VARIANCE FROM PROJECT SPECIFICATIONS
Variant density (check) _____ Other? _____
Variance approval of Agency Project Manager (initials) _____ Date _____
 7. CERTIFICATION OF REPORT
Filming Agent (signature) _____ Date _____
Agency Project Manager (sig) _____ Date _____
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PIMA (paper) IT9.2-1998, *American National Standard for Imaging Media - Photographic Processed Films, Plates, and Papers - Filing Enclosures and Storage Containers*. New York, NY: Paper Industry Management Association, 1998.

Copies of these standards may be purchased from:

American National Standards Institute (ANSI)
11 West 42nd Street
New York, NY 10036
TEL: (212)642-4900
FAX: (212)398-0023

Association for Information and Image
Management International (AIIM)
1100 Wayne Avenue, Suite 1100
Silver Spring, MD 20919
TEL: (301)587-8202
FAX: (301)587-2711

For further information on microfilming issues, contact the:

Government Records Division
Alabama Department of Archives and History,
P.O. Box 300100, Montgomery, AL 36130-0100
TEL: (334)242-4452
FAX: (334)240-3433
E-mail: records@archives.alabama.gov.
ADAH web site: www.archives.state.al.us.